

## REVISION OF THE GREATER ANTILLEAN SPECIES OF PAEDERUS (COLEOPTERA: STAPHYLINIDAE)<sup>1</sup>

By MILTON W. SANDERSON<sup>2</sup>

Ing. Fernando de Zayas, Havana, Cuba, collected a small series of a black *Paederus* while beating vegetation in the Sierra Maestra in eastern Cuba in 1963. The species closely resembles in size and color *morio* Mannerheim (1830) from Haiti which I collected at Furcy in 1959, also by beating shrubby vegetation. The only other known species in the Greater Antilles is *jamaicensis* Blackwelder (1943) described from one female. From Dr. T. H. Farr, Institute of Jamaica, I secured specimens of *jamaicensis* including the unrecorded male. In addition to presenting a description of the Cuban species, I have added notes and records for *morio* and *jamaicensis*, including descriptions and illustrations of the male genitalia and especially the eighth sternite of the female.

Blackwelder (1936:86) described the female of the Central American *Paederus laetus* Er. as having a "sagittate sternite of the ninth segment which lies between and under the large valvifers." If I have interpreted his term 'sagittate' correctly, this structure lies dorsad of the sternite behind the eighth, therefore would seem to be a tergite. I have referred to these two structures and the valvifers in the descriptive notes. The males of these three species have the same arrangement of parts in the ninth segment (genital segment) as in the females although the parts may be somewhat differently shaped. The parameres in the males have lines of sensorial bristles and the females have setae on the eighth and ninth segments, not shown in the illustrations.

The three species treated in this report belong to the subgenus *Neopaederus* Blackwelder (1939:1943), distinguished from *Paederus* s. str. by the absence of hind wings, and obliterated basal elytral angles. Other species of *Neopaederus* occur in Central America, Mexico, the Nearctic Region, and the Old World. Two species of *Paederus* s. str. are known to occur on Trinidad, St. Vincent and Martinique in the Lesser Antilles (Blackwelder 1943).

### KEY TO PAEDERUS OF GREATER ANTILLES

- |   |                         |
|---|-------------------------|
| 1. Eighth abdominal sternite deeply notched; males.....   | 2                       |
| Eighth abdominal sternite triangularly produced at middle of posterior margin as in Figs. 1 to 3; females.....  | 4                       |
| 2. Body uniformly reddish-yellow or orange except last two abdominal segments contrastingly black; median lobe (n.l.) of aedeagus (Fig. 8) recurved at apex, parameres (Fig. 5) each narrowed, broadly s-shaped at apex; Jamaica.....                                   | JAMAICENSIS Blackwelder |
| Body basically black; median lobe (n.l.) of aedeagus decurved (as in Figs. 7 & 9), parameres blunt or curved at apex.....   | 3                       |
| 3. Body black, elytra aeneous; seventh abdominal sternite longitudinally depressed, posterior margin emarginate; median lobe of last tergite acute at apex; parameres symmetrical (Fig. 6); copulatory sac of aedeagus with one curved process (Figs. 6 & 9); Haiti.... | MORIO Mannerheim        |

<sup>1</sup>This study was aided by a grant from the National Science Foundation.

<sup>2</sup>Illinois Natural History Survey, Urbana, Illinois.

- Abdomen only black, elytra bluish, pronotum and head greenish; seventh abdominal sternite flattened, posterior margin straight; median lobe of last tergite blunt at apex; parameres (Figs. 4 & 7) asymmetrical, one shorter and differently shaped from other; copulatory sac of aedeagus (Fig. 4) with two curved processes; Cuba.....ZAYASI new species
4. Eighth sternite (Fig. 3) with three triangular lobes; color basically black; Haiti.....MORIO Mannerheim
- Eighth sternite (Figs. 1 & 2) with median triangular lobe only..... 5
5. Median lobe of eighth sternite short (Fig. 1); color nearly uniformly black; Cuba.....ZAYASI new species
- Median lobe of eighth sternite more elongate (Fig. 2); color reddish yellow to orange, last two abdominal segments black; Jamaica  
JAMAICENSIS Blackwelder

*Paederus jamaicensis* Blackwelder

*Paederus jamaicensis* Blackwelder (1943:324)

This species was described from one female from Jamaica (British Museum) without further data. The author described it as "rufotestaceous throughout," adding that it might be immature. Through the courtesy of Dr. T. H. Farr, Institute of Jamaica, I have examined four specimens of this species, one of which Blackwelder identified. The latter individual, as well as all others examined, has the last two abdominal segments black in contrast to the rufotestaceous or orange foreparts of the body.

Records: Mt. Morce's Gap (4945 ft.), St. Andrew Parish, August 21, 1950, R. P. Bengry, 1 female. Hardwar Gap (ca. 4000 ft.), St. Andrew Parish, August 16, 1964, T. H. Farr, beating vegetation, 2 males, 1 female.

The striking bicolouration of *jamaicensis* will distinguish it from essentially black *morio* and *zayasi*. The median lobe of the male aedeagus (Fig. 8) is dorsally curved at apex instead of ventrally curved, and the apex of each paramere is broadly s-shaped. The copulatory sac (Figs. 5 & 8) bears a single curved process. The eighth sternite of the female (Fig. 2) has a long pointed median lobe, and the lateral angles of this sternite are broadly rounded. The ninth sternite is subtruncate at apex, not as narrow and emarginate as in *morio* and *zayasi*.

*Paederus morio* Mannerheim

*Paederus morio* Mannerheim (1830:39)

*Paederus morio*, Blackwelder (1943:324)

This species, the first of the genus recorded for the West Indies, was described from "Insula St. Domingo," and according to Blackwelder (1943) it is probable that the original specimens came from Haiti. Specific records are given in Blackwelder for Morne La Selle, Kenskoff, and Furcy—all in Haiti at elevations of 4000 to 6000 ft. Some of the specimens were taken by beating trees and shrubs. With Leonce Bonnefil and T. H. Farr I collected 11 males and 5 females at Furcy May 15 and 16, 1959 by beating shrubby vegetation. Blackwelder's description is sufficient for identification although in all my specimens the elytra were narrower instead of wider than the pronotum as described by him. The male aedeagus (Figs. 6 & 9) symmetrical except for the base of the process on the internal sac. Each paramere, as well as the median lobe, is ventrally hooked at apex. The apical margin of the eighth sternite of the female (Fig.

3) is tri-lobed, differing from *zayasi* and *jamaicensis* in which there is a single median lobe (Figs. 1 & 2).

*Paederus zayasi* Sanderson, new species

**MALE**—Color basically black, head and pronotum iridescent green, elytra iridescent blue; legs black; first three antennomeres yellow, remainder black. Head through eyes slightly wider than length measured from anterior margin of clypeus to nuchal constriction, irregularly setigerously punctured, with extremely fine and dense ground sculpture. Pronotum slightly longer than wide, widest slightly in front of middle, as finely and densely sculptured as head, and with a few scattered setigerous punctures. Elytra slightly narrower than pronotum, 1.2 times wider than long; suture about two-thirds as long as elytral length; surface uneven, with scattered setigerous punctures. Abdomen not as finely and closely sculptured as pronotum. Sternite of ninth segment broadened toward base, slightly asymmetrical, bluntly pointed at apex; dorsal lobe of ninth segment blunt at apex; valvifer acute, each strongly carinate on ventral margin. Aedeagus (Figs. 4 & 7) asymmetrical, one paramere elongate, parallel, rounded and thin at apex, other paramere not extending beyond apex of median lobe, blunt and slightly emarginate at apex, slightly pointed internally; median lobe strongly narrowed to an acute decurved apex; copulatory sac (Fig. 4) bearing two curved processes.

Length 9 mm; width 1.6 mm.

**FEMALE**. Similar to male in general appearance. Eighth sternite (Fig. 1) subtruncate at apex, sharply rounded at lateral apical angles, and bearing a short triangular median lobe; ninth sternite slightly emarginate at apex, median lobe (of ninth tergite) extending beyond ninth sternite, slightly ventrally curved.

**TYPE LOCALITY**—Cuba. Pico Turquino (6578 ft.), Sierra Maestra, Oriente Province.

**TYPE SPECIMENS**—Type male, 3 paratype males and one female collected June 1963, Fernando de Zayas. Zayas described the species as 'arboreal and it runs along the small branches of bushes like a big ant.' Type and paratypes in the collection of the Illinois Natural History Survey, paratypes in the collection of Fernando de Zayas. It is a pleasure to name this species after its collector with whom I spent many delightful days collecting in Cuba in 1959.

**DISCUSSION**—Superficially *zayasi* resembles the Haitian *morio* but close examination indicates many differences. The male seems somewhat isolated from *morio* and *jamaicensis* by its asymmetrical parameres (Fig. 4), and by having two processes on the copulatory sac instead of one as in the other species. The emarginate ninth sternite of the female (Fig. 1) is similar to that in *morio*, and the blunt median lobe of the eighth sternite in *zayasi* is more like that of *morio* than the acute lobe in *jamaicensis*.

LITERATURE CITED

BLACKWELDER, R. E.

- 1936. Morphology of the Coleopterous family Staphylinidae. Smithsonian Misc. Collections 94(13): 1-102
- 1939. A generic revision of the staphylinid beetles of the tribe Paederini. Proc. United States Nat. Mus. 87: 93-125
- 1943. Monograph of the West Indian beetles of the family Staphylinidae. Bull. United States Nat. Mus. 182:1-658

MANNERHEIM, CARL G.

1830. *Precis d'un nouvel arrangement de la famille des brachélytres, de l'ordre des insectes coléoptères.* Mem. Acad. Imp. Sci. St. Petersburg. 1: 1-87

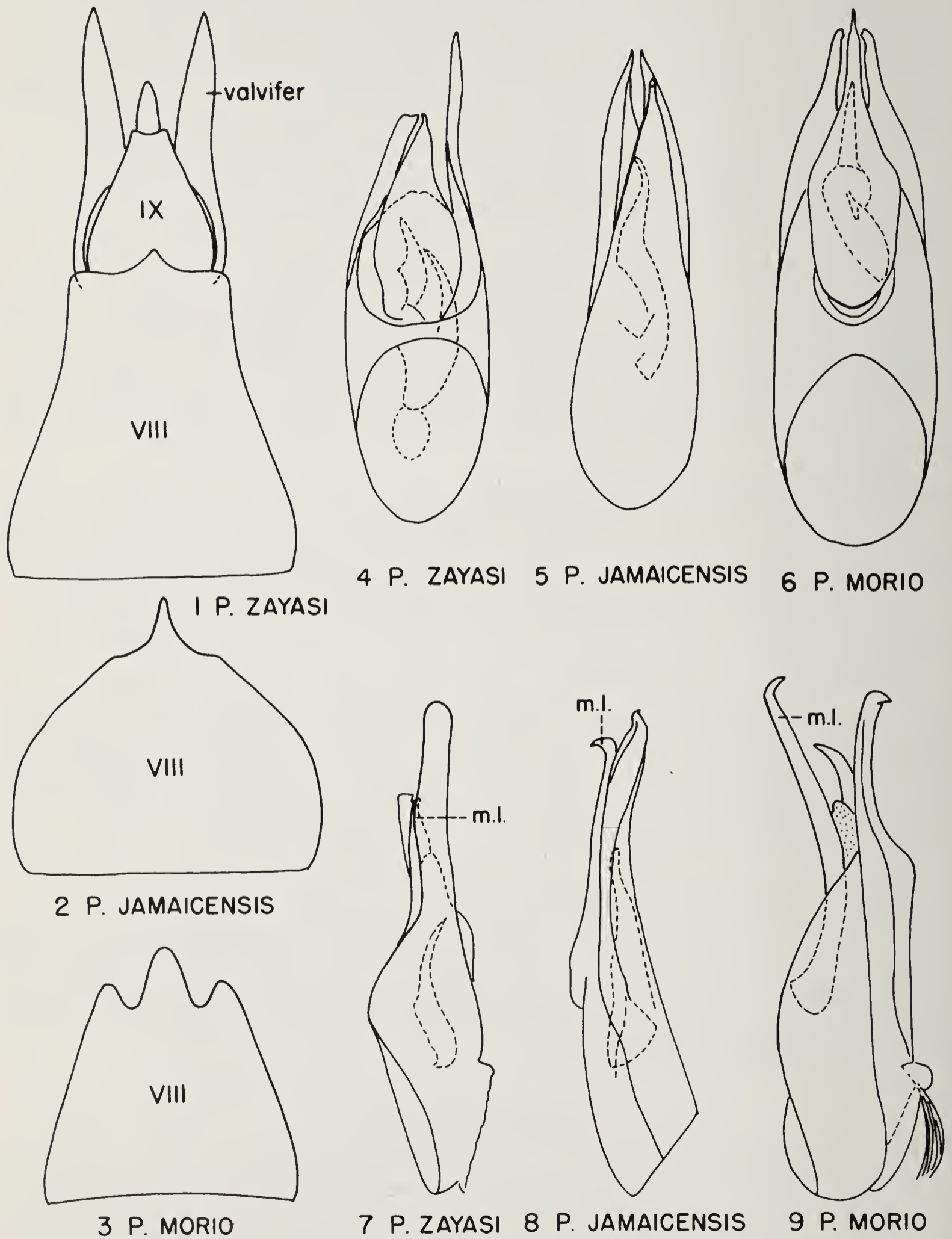


FIGURE 1, *Paederus zayasi*. Female eighth sternite and ninth (genital) segment. FIGURES 2-3, *Paederus* spp. Female eighth sternite. FIGURES 4-6, *Paederus* spp. Aedeagus from dorsal view. FIGURES 7-9, *Paederus* spp. Aedeagus from lateral view.